

In re: Song et al.
Serial No.: 10/051,916
Filed: January 17, 2002
Page 13 of 17

REMARKS

Applicants sincerely appreciate the thorough examination of the present application as evidenced by the Office Action of May 7, 2003. Applicants appreciate the Examiner's allowance of Claim 16 and the indication of allowable subject matter in Claims 4-11, 14, 18-23 and 27-30. Applicants submit that all the claims are patentable over the cited references for at least the reasons discussed below. Accordingly, Applicants respectfully submit that this case is now in form for allowance.

The Specification Objection:

The specification is objected to for a misspelled word at page 7. The specification has been amended above to correct the spelling as requested by the Office Action.

The Drawing Objection:

The drawings are objected to as items 110 and 210 each include the reference "Temperature Sensor" in their respective blocks. Item 110 is referred to throughout the specification as "temperature sensor circuit" and item 210 is referred to as the "temperature sensor." Attached hereto is a substitute sheet including Figures 1 and 2 in which the block of item 110 has been revised to add the word circuit. Accordingly, Applicants request the withdrawal of the drawing objection.

The Section 103 Rejections:

Claims 1, 12 and 13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over United States Patent No. 6,483,764 to Hsu et al. ("Hsu") in view of United States Patent No. 6,453,218 to Vergis ("Vergis"). The remaining rejections are based on Hsu and Vergis in combination with one or both of United States Patent No. 5,278,796 to Tillinghast et al. ("Tillinghast") and the Millman article. Applicants submit that the claims are not obvious for at least the reasons discussed below.

To establish a prima facie case of obviousness, the prior art reference or references when combined must not only teach or suggest *all* the recitations of the claim, there must also

be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. M.P.E.P. § 2143. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. M.P.E.P. § 2143.01, citing *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). To support combining references, evidence of a suggestion, teaching, or motivation to combine must be **clear and particular**, and this requirement for clear and particular evidence is not met by broad and conclusory statements about the teachings of references. *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). The Court of Appeals for the Federal Circuit has further stated that, to support combining or modifying references, there must be **particular** evidence from the prior art as to the reason the skilled artisan, with no knowledge of the claimed invention, **would have selected these components for combination in the manner claimed**. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

Independent Claim 1 is Patentable Over the Cited Art

Claim 1 stands rejected over Hsu in combination with Vergis. The Office Action asserts that the control circuit 35 of Hsu discloses the clock period controller circuit of Claim 1. The ROM look-up table is cited as the claimed "calibration circuit" of the clock period control circuit. The address input to the ROM table appears to be cited as the "period coding signal." The contents of the ROM table appear to be cited as the "period control signal." Office Action, pp. 2-3. Vergis is relied on as teaching a temperature sensor with a calibration circuit and two states. Office Action, p. 3. A "known parameter" is cited as the "temperature sensor output control signal." The address of a register 104 appears to be cited as "temperature coding signal."

Applicants submit that Vergis does not disclose or suggest the claimed temperature sensor circuit of Claim 1 having two states or being responsive to different inputs in each of the states. As is clear from the description of Figure 1 of Vergas, the output digital temp data 108 from the A/D converter 122 is responsive to the temperature sensitive diode 120. Vergis,

Col. 2, lines 27-53. The transmission of the temperature from the A/D converter 122 may be based on the clock signal 112 or responsive to the control circuitry 106. Vergis, Col. 2, lines 47-53. Thus, the other two illustrated inputs to the A/D converter 122 are described solely as controlling the timing of transmission of temperature information, not as affecting the value of the temperature reading. It follows that the temperature sensor 102 of Vergis does not disclose or suggest a temperature sensor circuit having a first state with an output based on a signal different from the temperature sensor input and a second state responsive to the temperature sensor input. Accordingly, the rejection of Claim 1 and the claims that depend therefrom should be withdrawn for at least these reasons.

Furthermore, the Office Action asserts that Vergis discloses a "test mode" and a normal run condition. Office Action, p. 3. In fact, Vergis does not describe two states of a temperature sensor. Instead, Vergis merely describes a sensor having the same "state" where the input conditions are controlled for purposes of calibration. As stated in Vergis, the "calibration constant is set in the factory where the diode can be tested against known parameters to determine its internal characteristics." Vergis, Col. 3, lines 2-5. The Office Action interprets this as disclosing a distinct "known parameters" input to the temperature sensor. However, as is clear from the discussion of Figure 1 of Vergis above, one of skill in the art would, if anything, understand this to refer to testing under known temperature conditions rather than overriding the actual sensor input to simulate a known temperature condition. There is no description in Vergis of any input other than the diode 120 input setting the value of the digital temp data 108. Accordingly, the rejection of Claim 1 and the claims that depend therefrom should also be withdrawn for at least these additional reasons.

The rejection of Claim 1 further relies on the combination of Hsu with the temperature sensor circuit of Vergis. However, Hsu is directed to a refresh rate adjustment circuit based on cell leakage monitoring rather than temperature compensation. Accordingly, there is no evidence of a motivation to combine Hsu and Vergis in the manner relied on in the rejections. Therefore, the rejection of Claim 1 and the claims that depend therefrom should be withdrawn for at least these additional reasons.

Independent Claim 12 is Patentable Over the Cited Art

Claim 12 also stands rejected over Hsu in combination with Vergis although the reasons for the rejection of Claim 12 are not separately addressed from those discussed above with reference to Claim 1. Applicants submit that Claim 12 is patentable at least for substantially the same reasons as discussed with reference to Claim 1. Furthermore, Applicants submit that Claim 12 is separately patentable as it contains recitations Applicants understand to correspond to the acknowledged reasons for allowance of Claim 4 in the Office Action. Office Action, p. 6. In particular, Claim 12 recites that the state of the temperature sensor circuit is "selected by the temperature sensor output control signal." Accordingly, Applicants respectfully request withdrawal of the rejections of Claim 12 and the claims that depend therefrom for at least these reasons.

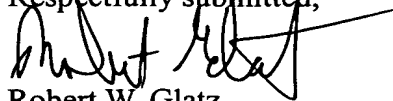
Claims 18-25 and 27-32 Are In a Form Indicated as Allowable

Claims 18, 19, 22, 27 and 28 have been placed in independent form. Claims 17 and 26 have been canceled. The dependency of various of the claims has been amended accordingly. Therefore, Claims 18-25 and 27-32 are now in a form indicated as allowable. Applicants submit that the rejections of Claims 17, 24-26 and 31-32 should now be withdrawn as obviated.

Conclusion

Applicants respectfully submit that, for the reasons discussed above, the references cited in the present rejections do not disclose or suggest the present invention as claimed. Accordingly, Applicants respectfully request allowance of all the pending claims and passing this application to issue.

Respectfully submitted,



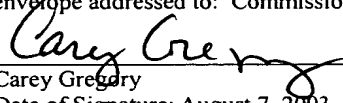
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In re: Song et al.
Serial No.: 10/051,916
Filed: January 17, 2002
Page 17 of 17

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on August 7, 2003.



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Date of Signature: August 7, 2003

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